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REVIEW OF THE TECHNICAL COOPERATION ACTIVITIES OF UNCTAD AND THIR FINANCING

In-depth study on UNCTAD's ASYCUDA programme

Study by the UNCTAD secretariat

At its twenty-fourth session, the Working Party on the Medium-term Plan and Programme Budget decided that, henceforth, at its annual review of the technical cooperation activities of UNCTAD, it would have before it an "in-depth study on a specific technical programme which would allow the Working Party to better evaluate the programme, recommend follow-up action and enhance UNCTAD's comparative advantage. At the same session it decided that the Automated System for Customs Data (ASYCUDA) would be the first programme to be the subject of the such an in-depth study.

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I. INTRODUCTION

1. At its twenty-fourth session, the Working Party on the Medium-term Plan and Programme Budget decided that, henceforth, at its annual review of the technical cooperation activities of UNCTAD, it would have before it an "in-depth study on a specific technical programme which [would] allow the Working Party to better evaluate the programme, recommend follow-up action and enhance UNCTAD's comparative advantage". At the same session it decided that the Automated System for Customs Data (ASYCUDA) would be the first programme to be the subject of such an in-depth study. This study covers the ASYCUDA Programme 1/ in its entirety with focus on those projects which are either already terminated/completed or on-going. It does not go into specific details of individual projects but assesses the overall design, implementation, results and impact and examines some key issues relating to the programme. The study is based on an analysis of project documents, various project performance evaluation reports and tripartite reviews, and it draws on the results of recent evaluations. Furthermore, inputs were provided through a visit to a project site and to the World Customs Organization in Brussels, as well as through interviews with staff.

2. The study has been prepared by the Programme Coordination and Evaluation Unit under its own responsibility, in co-operation with the Special Programme on Trade Efficiency and in consultation with the Technical Co-operation Policy and Coordination Unit. Mr. W. J. O'Donnell, a former senior official of the U.S. Customs Administration, was engaged as an independent consultant to provide substantive input to the study.

II. OVERVIEW OF THE PROGRAMME

A. Programme history in brief

3. In the early 1980s, UNCTAD developed ASYCUDA as a computer software package to automate the collection and compilation of timely and accurate foreign trade statistics for a group of West African countries. UNCTAD determined that a feasible approach would be to capture data as goods were cleared through customs. This approach yielded the additional advantage of computerizing the customs cargo operations and, in the course of doing so, often resulted in simplifying customs clearance procedures. By the late 1980s ASYCUDA had become UNCTAD's largest technical co-operation programme. As of April 1995, the system had been installed in 29 countries and was being installed in 38 other countries (see annex).

B. Programme objectives

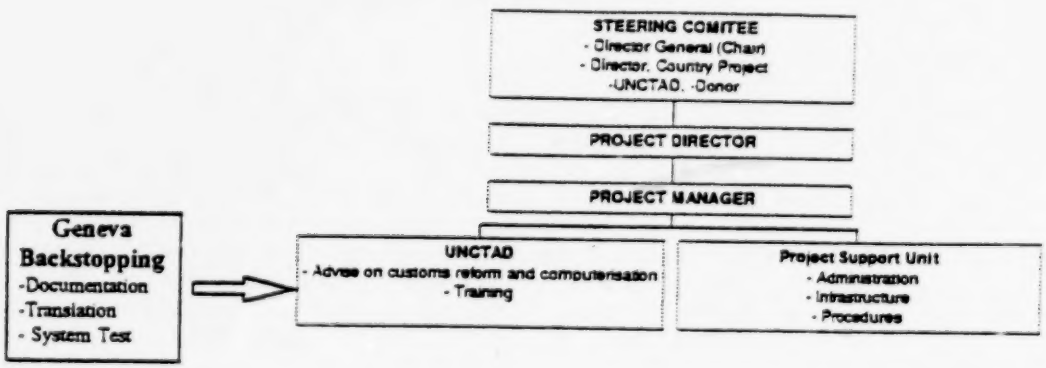
4. The main objectives of ASYCUDA are: (i) to reform the customs clearance process through the introduction of streamlined procedures and computerization, thus enhancing trade efficiency; (ii) to maximize customs revenue, which is one of the main contributors to overall government revenue in most developing countries, by ensuring that all goods are declared, that duty/tax calculations are correct and uniform throughout the country and that exemptions are properly managed; (iii) to produce reliable and timely trade

and fiscal statistics to assist economic management and to disseminate international trading standards through computerization of customs.

C. Structure and activities

5. The ASYCUDA Programme is part of the Special Programme on Trade Efficiency (SPTE). It is umbrella in nature, consisting of central management in Geneva, regional/subregional support centres and country projects. Central management in Geneva is provided by two units within SPTE, the Operational Activities Unit (OAU) and the Technical Development Support Unit (TDSU). OAU is responsible for strategic planning, project design and management, while TDSU is responsible for software development and technical support. In addition to the management of the ASYCUDA Programme, these units are responsible for other areas of work of SPTE. As of mid-1995 there are four regional/subregional support centers, namely West Africa, Eastern and Southern Africa, Caribbean, and Asia and the Pacific. The principal tasks of the regional support centers are: (a) preparation of national ASYCUDA projects; (b) Coordination of statistical data requirements and introduction of international standards thereon; (c) harmonization of procedures and documents; (d) management functions catering to training and software maintenance; (e) monitoring and support of implementation of national projects. The organization of country projects is as set out in chart 1.

Chart 1
Project Organization



6. The normal cycle for design and implementation of a national project to install ASYCUDA is from two to three and a half years. As a strategy of implementation, UNCTAD recommends a function-by-function approach. Following the signing of the project document, the standard procedure for the installation of ASYCUDA is as follows: Stage 1 - In-depth review of existing customs procedures and introduction of the appropriate reforms (this process continues through the life time of the project); Stage 2 - Training of key

customs officials; Stage 3 - Loading of files, including review of requirements, amendment of the customs ordnance, adoption of new forms and procedures to allow for automation; Stage 4 - Parallel run of new system with manual system, fine-tuning of the system; Stage 5 - Live operation and testing at one customs site; Stage 6 - Installation at other customs sites, evaluation and making the necessary adjustments to the system.

D. Programme funding

7. The ASYCUDA Programme has been the largest technical cooperation programme within UNCTAD since the late 1980s. The overall resource situation is summarized in Table 1.

Table 1
Contributions to ASYCUDA/FALPRO Programme, 1988-1994 a/

Source of Funds	Budget (US$)	Expenditures (US$) b/
Bilateral Donors:		
Denmark	2, 636, 679	1, 973, 374
France	329, 276	316, 457
Germany	685, 585	685, 585
Italy	1, 451, 337	1, 451, 337
Multidonors	153, 885	151, 230
Sweden	1, 558, 274	1, 486, 707
Switzerland	2, 484, 594	2, 206, 608
United Kingdom	1, 579, 495	471, 960
Subtotal	10,879,125	8, 743, 258
European Commission	1, 948, 785	1, 370, 731
UNDP c/	27, 048, 566	22, 100, 581
National and other resources:		
a) National Resources:		
Belize	180, 338	164, 114
Gibraltar	339, 607	292, 396
Malta	484, 357	389, 387
Namibia	102, 179	68, 390
b) World Bank Resources:		
Armenia	469, 426 d/	182, 500
Georgia	447, 557 d/	32, 733
Philippines	915, 105	242, 368
Uganda	56, 486	47, 793
c) IADB Resources:		
Panama	321, 113	205, 147
TOTAL	43, 193, 044	33, 839, 398

a/ Exclusive of programme support costs.
b/ Includes estimated 1994 out-turn.
c/ Includes cost sharing contributions channeled through UNDP from beneficiary countries mainly financed by IADB.
d/ Includes a component for the establishment of Trade Points.

8. At the central level, inputs (cash and/or in-kind) have been provided by Denmark, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, the United Kingdom and the United States, in addition to UNCTAD's own resources.

In the field, ASYCUDA projects are funded by a number of bilateral and multilateral donors. The major contributors in the past few years were the European Union (EU), United Nations Development Programme (UNDP), the Governments of Denmark, France, Switzerland, the United Kingdom and the United States. There is, at the same time, a fast-developing trend towards the provision of funding and substantial in-kind contributions by the user Governments themselves drawing on their own resources or on the proceeds of loans from the World Bank or the Inter-American Development Bank, given the benefits to be derived from the new system.

III. OVERALL ASSESSMENT OF THE PROGRAMME

A. Concept and design of the Programme

1. Programme concept

9. The Programme's rationale, laid down in the early 1980's, is still valid today. Over the years, experience in various countries has shown that there is a gap between the objectives of tax and customs reforms and actual performance, particularly related to revenue. An important reason for this gap, in several instances, is the lack of attention to administrative reform. In world trade, developed countries are taking advantage of new technology to exchange information on opportunities that help facilitate trade. In this context, ASYCUDA is a tool that can answer the needs of many developing countries and help them benefit from modern information technology. In fact, the development and dissemination of such technology has made the implementation of ASYCUDA more feasible to less developed developing countries, and the promotion of international norms and standards through computerization more significant.

10. The advantages offered by ASYCUDA in automation of administrative processes in developing countries are: (i) free software as part of technical assistance projects developed by UNCTAD with installation financed by governments, bilateral or multilateral institutions; (ii) the use of international codings and standards such as the Harmonized System (HS), the Single Administrative Document (SAD), EDIFACT messages, and U.N. codes; (iii) a new Version 3 (ASYCUDA++) which allows linkages among various users within the country as well as outside, for example, traders.

11. Customs can gain significantly by introducing computerization. Among the various and most striking benefits are speed of data processing, selection of information to enhance control and the rapid processing of customs declarations (registration, payment, accounting, tracking of goods, etc.). In addition to customs, the other main beneficiaries of computerization include importers, brokers, public treasuries, and national statistical agencies.

12. The underlying concept of the Programme is well developed. The solutions accurately address the problems. The objectives are well defined and are indicative that the programme has a clear view of what is needed and how to satisfy those needs. What is most important, its managers have a vision,

a goal that they believe in and know is attainable. Their concepts reflect a pro-active posture.

13. At the international level Member States have recognized the value of the programme. Thus, at the United Nations International Symposium on Trade Efficiency (held in Columbus, Ohio, United States in October 1994), Governments stressed the need for maximizing the use of information technology in Customs, calling for the development of computer applications for the Customs processing of commercial and financial transactions taking into consideration the experiences of all countries. It was also recommended that Governments should implement ASYCUDA, where applicable, and computer interfaces should be developed and made available to traders (Para. 3, Section B., TD/SYMP:TE/6).

2. Programme design

14. In general, the design is appropriate in achieving the Programme's overall objectives. Furthermore, the Programme has benefited from experience, applying lessons learnt from this experience in the design and implementation of new projects. In its design, the Programme has also taken into account the flexibility and adaptability called for by the varying levels of development in customs administration and commerce of different countries. However, there is room for improvement with regard to the role and functions of the regional support centers and training.

15. The regional/subregional support centers are meant to provide support to country projects, respond to requests for new projects and assist in identifying the funding thereof. They co-ordinate training and ensure regional standardization of the ASYCUDA computerized systems. The review of workload in some previous evaluations on the regional projects has shown that the principal tasks performed during the first few years centered around initialization of national projects and monitoring their implementation. However, these centers could be more valuable if, in addition, they provided continuous support to countries after the completion of national projects, placing more emphasis on management oversight and technical maintenance of individual national projects including upgrading of the system and ad hoc expert troubleshooting. These functions become increasingly important as more and more countries have ASYCUDA installed and come to depend heavily on it. Collapse of the software and interruption of declaration processing, collections, or generation of statistics caused by any technical problem may jeopardize the sustained results of a project. The survival of the Asia and Pacific regional support center serves as a good example of the demand for such continuing technical support: thus after UNDP funding ran out, in view of the strong interest of the user countries the related project has been extended with funding solely from them.

16. Historically, training for user countries has been designed, developed, and conducted on three parallel tracks based on languages, rather than on a common core which was subsequently translated. As SPTE recognizes, this has resulted in a fragmentation of training efforts and diluted the overall Programme. Furthermore, with one exception, there has been an absence of follow-up on the effectiveness of training.

17. As part of the development process of ASYCUDA++, SPTE has developed a new strategy for training. It has a sound foundation based on the cornerstones of modular approach, needs analysis, job relatedness, and central control. The strategy is comprehensive and well developed. It covers the scope of training required, proposes a wide variety of modules aimed at meeting different training needs, and establishes basic requirements for training methods, documentation standards, resources, locations, and a provisional timetable.

18. There is a need to establish a mechanism to follow-up the effectiveness of training. Such feedback is an important tool for planning of future training and, in this light the ASYCUDA Programme should scrutinize past assumptions for their validity in the future focusing on an analysis of reality and needs. While it is too early to judge the outcome of this approach, it has avoided the pitfalls of the past. It calls for a much higher level of central control involving a proactive style of programme oriented central management over the development process. It recognizes the need to ensure a cohesive, uniform package with a high standard of quality and effectiveness.

19. Training should also be directed towards institution-building. It is a main avenue to lead managers, supervisors and employees into seeing themselves as an integral part of the trade sector. Through training, they should develop a perspective that they are part of the driving force for creation of trade policy and that they have a key responsibility for, and a vital role in economic development. It follows then, that the training should be divided between the mechanism and follow-up of operating the automated system and using it for trade facilitation and policy development.

B. Implementation

20. The world's largest customs programme, ASYCUDA currently has been, or is being installed in sixty seven countries and proposals for some ten others are being developed. This growth has been realized because the programme has the internal flexibility to provide technical assistance to a large number of countries that are at different stages of political and economic development, responding to the variables of country size, trade volumes and patterns, political context, and sophistication of customs administrations. At the same time, project management has progressed from elementary beginnings to an advanced methodology for planning and implementing country projects. Detailed and sophisticated project documents and implementation plans have been developed and modern software tools for project management are used to track and control the implementation activities. The leadership, experience, and expertise of Programme personnel have contributed to this progress.

21. This evolution has not been done in isolation and indeed, it has been influenced by a number of external forces. First, there has been a distinct shift in the expectations of potential users. Thus, while in the early days of the Programme, client countries tended to be undemanding and passive, in recent years they have become proactive. This shift has led to the Geneva central team being carried by the momentum of major national projects, such as

Hungary, Malta, Philippines, and Romania. In addition, many projects have had major involvement by international organizations such as the EU, the World Bank, and the IMF which has brought a new degree of sophistication and expertise into the picture. Furthermore, competition from the private sector has been very effective in forging a mark of excellence and forcing a new atmosphere of assertiveness and enterprise. Lastly, developing countries are more sophisticated about managing an automation project and increasingly, they are using management consultants and outside advisers and are also taking advantage of the training and advice offered by the World Customs Organization (WCO) and individual Customs Administrations.

22. To build on the impressive achievements described above, the Programme must now give priority to a number of management challenges relating to internal oversight, planning, communications, programme support, and software development and marketing.

1. Internal oversight and management

23. When viewed from a management point of view the picture that emerges is characteristic of an enterprise that gives greater priority to sales than to production, distribution and aftermarket support. In spite of outstanding staff, the capacity to adhere to the basic management tenets of planning, coordinating and controlling calls for improvement. Failure to be prepared to deal with them can divert attention from the main objectives, create disorder and frustration, and weaken the total effort. While it cannot afford to maintain staff devoted full time to oversight, the Programme's size and importance call for it in the interest of ensuring efficient delivery and quality control of individual projects.

24. Currently the regional/sub-regional support centers are semi-autonomous and the system to monitor and control their activities is inadequate; reporting is done on an ad-hoc basis, and contacts are left to the discretion of the individual ASYCUDA Programme officers in the Geneva central team. If the centers are viewed simply as salespersons, then the controls would not be as urgent, but within the new context the reality is that each is the chief spokesperson in the respective region and the ASYCUDA projects can rise or fall depending on their success. In this light, SPTE management needs to exercise greater control, provide more direction, and ensure proper coordination between the different components of the Programme at the central, regional/sub-regional and country level.

2. Planning

25. The ASYCUDA Programme has operated on a rather general conceptual plan. Details of long and short term goals have been left to the discretion of individual staff. While it does have an organizational plan, it has not been fully rationalized, nor have any of the specific details been reduced to writing in a business plan. By contrast, a great deal of planning is done for individual projects. The project documents have answered the classic questions; "What are you going to do?" " How are you going to do it?" " What will it cost?" " When will it be done?" and "What are the expected outcomes?" However the programme as a whole has not developed a business plan.

26. Past efforts at planning have been at the micro level, focusing on a country by country implementation strategy. The vision has been too narrow, looking only at the immediate problems of installation projects. Now, the programme has grown too large and too complex to continue without a well developed plan. The lack of a comprehensive business plan has unnecessarily placed heavy demands on SPTE managers who have to mentally control countless numbers of finite details. More importantly, it places the organization at risk because there is no pathway for institutional continuity. This void inadvertently builds fences around the programme rather than bridges to it. Donors view it as a major obstacle in attempts to secure trust funds and enlist cooperation. Accordingly, there is a need to look for long range trends and adjust the programme to meet them, with a comprehensive business plan including concrete objectives and measurable goals. In addition to its value as a sound management practice, it would be a major tool for getting budgetary and extrabudgetary resources.

3. Communications

27. Communications within SPTE are strong. Both the Operational Activities Unit (OAU) and the Technical Development and Support Unit (TDSU) hold weekly meetings to cover status reports, new issues, potential problems, and other items of general interest. Representatives from TDSU attend the OAU meetings to keep close coordination between their respective activities. Meetings are held for the entire SPTE staff on a regular, but less frequent basis.

28. On the other hand, communications with regional centers, client countries and UNDP Resident Representatives are on an ad-hoc basis and for the most part deal only with specific issues. In some cases the information pipeline is augmented by missions, either to Geneva or by Geneva staff. In addition, at one time SPTE issued a newsletter that, among other things, served as a vital link within the entire ASYCUDA community and was considered informative and helpful; however, this newsletter was dropped some three years ago. The absence of strong, consistent external communications has weakened the ASYCUDA Programme and at both of the donor meetings held in 1991 and 1993, requests were made for more information. The general feeling is that more needs to be done to keep user countries, regional centers and donor countries informed and involved. Donors and recipients have expressed concern that they are not part of the decision-making process including shaping the form, substance, direction or duration of the programme. This lack of external communications is a material weakness that softens the effectiveness of the programme and fortifies the perception that the ASYCUDA Programme does not provide adequate after-market service once the software has been installed.

4. Programme support

29. As indicated previously, two units within SPTE have the responsibility for the ASYCUDA Programme, the Operational Activities Unit (OAU) and the Technical Development and Support Unit (TDSU). The division of authority and responsibility between the two for general user support, technical support for problem resolution, and responsiveness to change request has never been fully rationalized. While there is no question that each unit does an outstanding

job in its respective field, all too frequently problems arise when customs experts attempt to resolve technical problems or when programmers attempt to solve operational customs problems. Whenever this happens it creates problems for both the user country and the Geneva central team: the user does not get proper support or does not get a response and estrangement develops between the Programme and its customers. One constant result is that software development is hindered because programming resources are drained by efforts at problem resolution.

30. This does not have to be the case. Problems encountered by the user could be handled in a progressive fashion starting with a first response function in the form of a help desk. Its staff would have sufficient knowledge to guide the user through the mechanics of using the system, or if the problem goes beyond that, direct the inquiry to the proper area. They would have the ability to distinguish operational problems from technical software support problems, referring operational problems to OAU and technical problems (bugs) to TDSU. In this light, SPTE should establish a clear pathway for user support, covering both problem resolution and change request, with clear definitions of responsibility. Once this hierarchy has been established it should be monitored for compliance and sufficiency. Control of the process should be automated and tracked using a database system giving management the critical information needed to monitor operations and place control back in the hands of SPTE senior management. The question of management control will become even more critical with the advent of ASYCUDA++ because each user will have the capacity to add functions to the core system.

31. A substantial number of ASYCUDA staff indicated that the drain on their time for fund raising and project administration related to the use of the funds diverted them from their substantive responsibilities. The related efforts are a major distraction from the substantive work of the programme and, in this light, there is much to be gained by separating the resource generation activities from operational activities

32. In programme support, an additional problem relates to individual skills' mix of project staff both at Geneva and in the field. At Geneva, the skills' mix of the individual OAU staff would benefit from additional training in the installation, configuration and use of all of the ASYCUDA modules as well as the extraction of statistics. Customs experts, technical experts and regional centre staff generally have training in installing and configuring, but they need training in project management and trade facilitation measures, as well as a general orientation to other UNCTAD programmes such as TRAINS and ACIS.

5. Software development and marketing

33. The Programme has kept up-to-date with the most advanced software. It has migrated from a very rudimentary basic system to the most advanced system available today (ASYCUDA++) based on a more flexible, independent and open environment utilizing both UNIX and DOS operating systems, a relational data base and EDIFACT messages. Thus the system is capable of integrating itself into a world network for data and information exchange between users. Using state of the art technology it can serve clients of all sizes from small

countries with populations of under 50,000 to major industrial countries. The software of the new version (ASYCUDA++) is notable for the way its desig has responded to the demands for a diversity of approach. It has achieved th degree of sophistication that developed countries operating in a mainfram environment would like to emulate. A pilot version of ASYCUDA++ has alread been installed in seven countries. While not all developing countries wil require the same degree of support within the new context, there is a need fo a framework that provides uniformity and standardization.

34. Normally a software product goes through a series of tests as part o the development phase of its life cycle. It would not accord with norms i the industry to deliver a software package before testing has been completed Testing can be done in-house or contracted out. Often when an organizatio builds its own software, the user acceptance testing is done by a specia group, representing the end user, with extensive knowledge of the use requirements and its members generally are familiar with the work that th software is designed to accomplish. In the case where the development of th software has been contracted out to an external entity, the user acceptanc testing is done by the purchaser of the software. In either case, the proces is simple, the testing group measures the ability of completely debugge software against the original design requirements with the aim of determinin whether or not the buyer got what he/she paid for. In reality this proces also uncovers programming bugs that had slipped by the previous testing.

35. Software testing in the ASYCUDA programme is a mixture of the tw variations. Unfortunately, several of the test steps have been omitted and i many cases untested software has been sent to user countries. Not only doe this produce frustration and distrust, but it also drains the meager resource of the Geneva central development team. At times there has been a backlog o over 400 problem reports and change requests. This would not be an unusuall large number if detected within the confines of the development process. However when problems are detected by the end user, it becomes a seriou matter.

36. Resource constraints have led to taking calculated risks concernin testing. With the exception of two iterations of version 2, the Programme ha been forced to adopt the policy of "let the user be the tester" In the earl iterations this was done in an unstructured manner. In the later iterations test locations were selected, however, testing was done in the blind. Whe pressed on the weakness of this approach the response has been that even majo international software developers have problems with bugs, but this analogy i superficial at best. It does not take into account the losses suffered i terms of sales, or consequences suffered by the personnel involved. Tw important points have been overlooked: the bugs that evaded detection durin the testing were few and they were costly.

37. In dissemination of the software, the ASYCUDA Programme should have marketing strategy to identify the countries that would benefit most from th available systems, and to coordinate the efforts of the regional suppor centers to gain the most benefits with the aim of delivering the righ product to the right recipients at the right time. Because of the differenc in infrastructure and the levels of technology, certain countries are no

ready for the advanced version of ASYCUDA, while others are, and are in the position to go for the most advanced technology.

C. Results and impact

38. ASYCUDA primarily aims at maximizing revenue, improving the efficiency of customs clearance and providing accurate data to government statistical agencies, the ultimate goal being to build national capacity in efficient and effective management of the economy. In this light, three criteria of success appear paramount:

- Ø *Faster clearance of cargo.* Trade should benefit from faster clearance of goods through the computerized system and simplified customs procedures. Associated overhead costs which affect the price of the exported and imported goods should be reduced to a minimum.

- Ø *Increased revenues.* Customs revenues resulting from more efficient methods of collection, accounting and enforcement should be expected to increase. This would result primarily from a reduction in under-reporting, but also from the release of customs officers from manual entry processing to enforcement, especially physical examination of goods.

- Ø *Improvements in data collection and dissemination.* It is essential for decision-makers to have accurate trade statistics at their disposal. ASYCUDA data captured by Customs could be transferred to the national statistical office on tape or diskette for immediate analysis and publication. National and enterprise level statistics could be made available. The time lag for publication of statistics should be considerably reduced.

39. The impact of the ASYCUDA system varies from country to country. Some customs administrations have experienced significant development, becoming dynamic and vibrant and reaching a high level of self sufficiency. For the most part, these countries' administrations have taken the opportunity to rationalize their process and have re-engineered their operations. They have brought about reforms in one or more of the following areas: incorporating the standards of the Customs Cooperation Council's (CCC) Kyoto Convention, adopting international standards and codes, adopting the Harmonized Tariff Code, converting to the GATT valuation practices, modifying and modernizing procedures, practices, policy, and law and automating the cargo clearance process. The impact on other customs administrations however, has been less significant or even marginal, in some cases affected by factors beyond the control of the ASYCUDA Programme. It was not possible for the study team to determine how many and which countries fit into either category as a system to monitor and control the progression of individual countries does not exist. In the absence of an entire picture of the programme results and impact, the study team presents the following evidence as it gathered.

1. Faster clearance of cargo

40. One major benefit has been the simplification of the clearance process. In a number of countries the number of documents required has been reduced

significantly. In one instance, a single standardized customs document replaced an average of 25 different forms, drastically shortening clearance time. Mauritius recorded a reduction in clearance times from an average of 4 days to 1 day, and Sri Lanka from 2-3 days to less than one day. Figures I and II show the efficiency increase of customs in those Asia and Pacific countries where ASYCUDA has been installed.

Figure 1. Clearance Steps

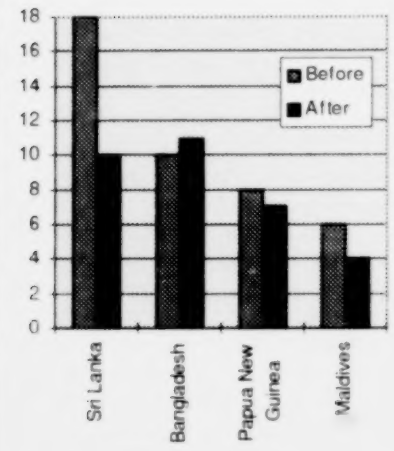
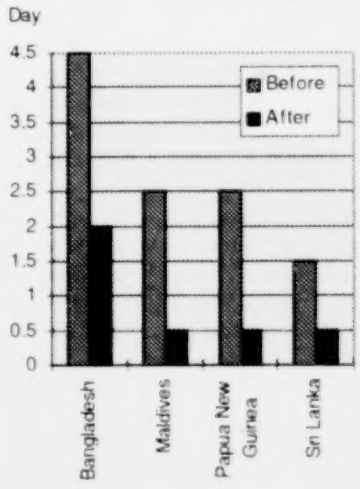


Figure 2. Average clearance



Sources: Respective Customs administration.

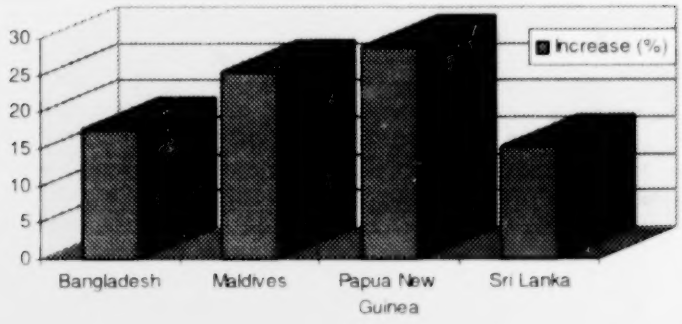
41. The increase in efficiency of customs service has provided a more responsive climate for the trading community in their transactions with customs.

2. Maximized revenues

42. In some developing countries, customs have been facing a dilemma: commitments have been made with the World Bank and the IMF to lower tariffs while, at the same time, increase revenue. According to the Director-General of Customs in Honduras, "with ASYCUDA, that challenge seemed easier to meet." Mauritius recorded an increase of 10 per cent in customs revenue. In the case of Romania, revenue increased at the pilot site by an average of 13 per cent in one year, which enabled customs to pay for extensive refurbishment of the main port office. In the Caribbean, there is evidence of increased revenue. According to the Deputy Director-General of Customs of Mauritania, ASYCUDA has played a crucial part in improving revenue collection in the country. Since its introduction in 1984, customs receipts increased by 75 percent although, during the same period, tariff rates were reduced by half and the total value of imports fell by 30 percent. When properly trained, customs officers are able to track unpaid declarations and generally perform their job more efficiently. ASYCUDA also enables Customs to exchange data with the tax Department to cross-check information.2/ In Sri Lanka, duty revenue increased in spite of lower duty rates for 1994 over 1993. In the initial three months of operating ASYCUDA,

Sri Lanka Customs generated 1.2 billion rupees (or about US$24 million) in additional revenue.

Figure 3. Increse in revenue 1993-1994



Source: ASYCUDA Asia and the Pacific Regional Centre.

3. Improvement of statistics

43. ASYCUDA has also made important contributions relating to the collection, organization and management of statistics and data. In the first place, it automatically provides ready made statistics for policy makers and for economic analysis at both national and international levels. Information is available immediately on exemptions, manifested goods, cargo volumes, revenue, etc.

44. Furthermore, the system is unique in generating trade data at the enterprise level for trade promotion and trade efficiency. Data bases and directories of exporters and importers are an indispensable tool for trade promotion, and are essential for providing foreign trade partners with contact data on local exporters and importers. When these directories are well presented, they are a showcase for national exports and are also a basic working document for identifying the most appropriate firms in the country for trade promotion activities. Enterprise-level trade data from customs sources are an ideal point of departure for compiling directories of exporters and importers. In an increasing number of developing countries, computerized customs data give a company code for each export and import transaction, enabling the exporting or importing enterprise to be identified.

45. In comparison with other sources such as surveys, data processed by ASYCUDA has the advantage of being comprehensive, relatively cheap to obtain and easily updated. This data combines both contact data (names and addresses) with quantitative data (values and quantities of transactions by commodity and country). Detailed enterprise-level customs data enable databases on exporters and importers to be compiled using precise trade information classified by commodity, country and enterprise. A search through such a database can have one of many objectives: to draw up a list of all firms with experience in exporting a particular product to a specific target market,

company-specific trade profiles, or listings of companies with experience in a specific partner country. ASYCUDA has also made the cost of this data low, as there is no need for both the trade promotion organization and the firms to fill out questionnaires and give interviews, as would be required by surveys and other expensive data-generation methods It has also made updating procedures simple, as the data are available on a periodic basis.

46. In sum, the availability of such data benefits the business community and the economy at large reducing information costs for the public and private sectors, and increasing the transparency of foreign trade operations. However, the efficient and effective use of the information generated by ASYCUDA varies from country to country depending on the degree of institutional development of the public service. The study team did not find sufficient information to assess the degree to which statistics and data available through ASYCUDA has been used by national administrations, but this does not diminish the unique role of ASYCUDA in making the data readily available for the various purposes described above.

IV. SELECTED ISSUES

47. The study team analyzed what, in its view, are three key issues: UNCTAD's comparative advantage, sustainability of the ASYCUDA Programme, and relationships with other UNCTAD technical cooperation programmes.

A. UNCTAD's comparative advantage

48. The ASYCUDA Programme has contributed significantly to the reform and improvement of customs management. Customs is generally perceived as a bureaucratic and regulatory agency, and ASYCUDA has helped to place this institution more squarely in the development context. Thus, in many countries customs procedures and the methodology of data collection have been transformed and these reforms have led to speedy transactions, benefiting significantly the private sector. In addition, customs revenues have seen substantial and rapid rises, and opportunities for untoward practices have been reduced.

49. The ASYCUDA Programme's achievements have been superior in terms of the quality of the software. No other software producer can come close to ASYCUDA's range of functions or its technical features. Furthermore, with the development of ASYCUDA++ all competitors, both in the public and private sectors, are far behind. The World Customs Organization has given strong endorsement and support to the programme. Countries that have been leaders in customs automation, such as Australia, Canada, Denmark, England, and the United States, have endorsed ASYCUDA rather than attempt to rival it. The Programme's achievement is particularly apparent in the case of the United States where a major revision is being planned that will be based on the same architecture used in ASYCUDA++.

50. The ASYCUDA Programme is based on the premise of providing a broad range of the technical assistance activities focused on customs reform, coupled with trade facilitation expertise and supported by the efforts of other UNCTAD technical assistance programmes that cannot be rivaled. It would take years

for any other organization to marshall the know-how and garner the widespread support that the programme now has. Cost for a private sector venture would be a major factor. In addition to research and development cost, and the overhead and profit margins, the economies of scale would not be there.

51. In considering the comparative advantage, the value of fifteen years of contacts and experience cannot be discounted. Another important consideration is the major impact that ASYCUDA has had on standardization. Sixty seven countries are now using a common tariff, standard international codes, and as they convert to ASYCUDA++, standard EDIFACT messages for data exchange. This has established a broad base which will provide the foundation for greater efficiencies through the utilization of a customs to customs linkage. It will benefit regional and sub-regional organizations in their efforts to exchange data and to establish policy and negotiate in international forums. Likewise, because of the standard platform, international carriers, multinational traders, and agents will have lower cost, faster service, and major reductions in dwell time of cargo. Without ASYCUDA, these benefits would be diminished because there would be fragmentation rather than cohesion.

52. To maintain this comparative advantage UNCTAD must build a strong relationship between policy analysis work and ASYCUDA on two levels, at the programme level within SPTE and between ASYCUDA and other programmes within UNCTAD.

B. Sustainability of the programme

53. Sustainability is based on four key factors: (i) keeping it relevant, therefore desirable; (ii) quality in product and services; (iii) providing proper political and financial support; (iv) good management.

54. The ASYCUDA Programme has concentrated a significant amount of resources on helping developing countries reform their customs operations and improve their capacity to collect, organize and manage data and information. The programme has encompassed a range of activities including system development, developing and upgrading software, installing the system in user countries, operating regional centers, training and advisory services. Developing countries, for the most part, have welcomed these activities and the rapid growth in the number of participants in the last five years testifies to the value placed on the Programme.

55. The Programme has been funded by UNDP and Trust Funds from bi-lateral donors and these financial contributions indicate the demand for the Programme and its relevance. The Programme cannot be sustained unless there is an increase in political support coupled with increased extrabudgetary resources including in-kind contributions from both the public and private sectors. This requires a strategy including better communications, an active outreach programme, and strengthening of the bonds with other UNCTAD programmes and other international organizations.

56. Furthermore, private sector financing represents a vast potential. Multinational corporations, trading companies, transport companies, and their associations are very much aware of the benefits they would receive from a

reformed, modernized, automated customs service and in international forums, several have expressed interest in providing support. In the case of ASYCUDA the potential base for private sector donors is very large. Contributions can come in kind other than in cash. For example, international air and ocean carriers have been using EDIFACT messages for more than ten years. They have built translators, databases, and message switching routines for their own purposes and have the technical know-how which could be shared.

57. There has been discussion on the feasibility of recovering cost for the system from its users. This option could be explored in greater detail. Modest fees at the transaction level as well as for participation in the system could be collected from agents, carriers, and service organizations; i.e. Ports Authorities, or data service centers (contractors who act as the data processing shop for agents, carriers, importers, or port authorities). Creation of a broader base of revenue source through universal coverage would increase the amount of available funds, create a partnership with the developing country, and assure potential donors that recipients are committed to the objectives of the programme. The fees could be a direct transaction levy, or user countries might be encouraged to reinvest a percent of revenues received because of efficiencies gained or revenues increased through use of the system. However, it should also be noted that, depending on their circumstances some countries might find the latter approach too heavy a burden.

58. An important aspect of user funding is the quality factor. Enterprises that have participated in developing the concepts and are aware of the expected outputs and are paying the bill will demand excellence in service. This will force public services at the country level to adopt a position of greater openness and the resulting transparency should improve the partnership between customs administrations and the trading community. If a direct relationship between funding and quality of service is established, it will propagate itself.

59. The direct links between the programme management and the capacity of the Programme to sustain itself are self evident. The internal organization, policies and procedures dealing with aspects of the programme, such as implementation, training, user documentation, systems acceptance testing, user support all have a direct relationship to the external perceptions of credibility, trust, and confidence that are formed by users, donors, international organizations and other UNCTAD units.

60. The ASYCUDA Programme's ability to react in a responsive and timely manner has a direct affect on the confidence placed in it by recipient countries. Two of the most visible areas are version delivery and user support, the latter - especially efforts concerning problem resolution and change request - being critical. Earlier, the Programme had some erosion of its credibility as countries were not sure that it could deliver on promised outputs. In the past, handling of issues such as cargo selectivity, the manifest module, and statistical extractions weakened their faith. However, the Programme has taken steps to resolve outstanding requests and to improve responses to test problem reports (TPRs) and change requests through establishing a system to handle any Version 2 problems. Furthermore, the

World Customs Organization has observed that things have improved considerably in the last four years. Doubt has been expressed about the delivery dates and functionality of Version 3 (ASYCUDA++). While it is too early to judge how responsive and effective the ASYCUDA Programme will be on Version 3 problems, the degree of confidence today is much higher than in the past. Generally, SPTE needs to be candid about what will be delivered and when, and the true nature of the current efforts in the Version 3 countries.

C. Relationship with other UNCTAD technical cooperation programmes

61. A review was carried out aimed at determining the relationships between ASYCUDA and other UNCTAD technical assistance programmes. The objectives and features of these programmes were compared with those of ASYCUDA to determine the degree of cooperation and areas of potential consolidation. The general finding is that while the coordination and cooperation between ASYCUDA and the other programme within SPTE (i.e. Trade Points) are sound, there is room for increased cooperation and coordination between ASYCUDA and other programmes especially ACIS, TRAINS and the other technical cooperation programmes in Shipping, Multimodal Transport and Ports and in Land-Locked Developing Countries. These programmes target essentially the same clients (i.e. traders) and are all in some way connected to the chain of events involved in the movement of freight and the manipulation of data associated with it. In this light, they have the potential for greater linkage with ASYCUDA, especially if the focus is more customer-oriented and a holistic approach to technical assistance at the country level is adopted.

62. It is the study team's view that there should be closer link between ASYCUDA and ACIS, and even possibly the two system to be consolidated. When viewed from the computer systems level there is also an opportunity to develop a unified approach which would consist of developing a platform to consolidate automated systems within UNCTAD's programmes. In the study on UNCTAD's computer systems conducted by the Programme Coordination and Evaluation Unit in 1992, it was recommended that the consolidation or integration of some of the software packages designed for use by developing countries should be continued, including, as appropriate the development of suites of programmes with basic systems and additional modules to meet the particular requirements of users. The study also pointed out that the establishment of a comprehensive trade information system TRAINS (Trade Analysis and Information System) through the integration of a number of related systems (including the Trade Control Measures Information System, GSP System, ITC's Traders' data base, and the information system for trade related environmental measures) was a good example of this approach. The technological hierarchy would allow, protect, and enable the accomplishment of the goals, mission, and objectives of each individual client at the country level while preventing duplication, providing greater coordination and enhancing cooperation.

63. As regards cooperation and coordination between AYSCUDA and TRAINS, joint efforts (e.g. joint missions) could be envisaged to improve the collection of statistics for TRAINS and the dissemination of customs data generated by ASYCUDA system in the user countries.

V. LESSONS LEARNED AND RECOMMENDATIONS

64. ASYCUDA has been a very successful technical assistance programme. It has brought about major reforms and improvements in policy, practices and procedures governing the administration of the import and export laws. It has also enabled user countries to adopt international codes, forms, and standards, one of the most important being the adoption of the Harmonized Tariff Code (HS). The Declaration, Accounting, and Statistical modules have provided the data processing power to simplify entry procedures, speed the release of cargo, collect and account for revenues and produce accurate, reliable, and timely statistics. The data generated is valuable for national and international policy-makers and for economic analysis in such areas as the development of trade policies and trend analysis.

A. Lessons learned

65. There has been consensus that ASYCUDA has the technical capability to perform well. It contains all of the functions required of a customs computer system. As with any other system, there are key prerequisites for a successful implementation and operation of ASYCUDA as part of a general reform of customs. Based on the experience of individual country projects and the assessment of the effectiveness and efficiency of the Programme, broad lessons for future planning, design and implementation are set out below.

66. *Commitment.* There must be a strong commitment from the government as well as the customs administration to ensure successful implementation of the system. This sometimes includes financial commitment from the government in addition to funds that may be provided by donors. Once it is decided to develop and implement a computerized customs system, it must be understood that it will require on-going support. This includes supplies, periodic replacement of equipment, technical support (including good communications with the central Programme management in Geneva and/or regional support centres), and software upgrades.

67. *Needs analysis.* A careful analysis of actual needs and the situation of individual countries is a prerequisite. Yesterday's assumptions, however valid then, may not be a guide to tomorrow, nor are assumptions that prove to be valid guides to action in one country or region automatically applicable in others. Accordingly, it is important to guard against wrong assumptions through testing their validity as each project develops.

68. *Reform in customs administration.* ASYCUDA cannot be successfully implemented without first undertaking a major reform of customs procedures. This may include elimination of unnecessary processing steps, simplification and elimination of certain forms, streamlining of the document processing flow within the office, and adoption of international codes.

69. *Implementation team.* Successful implementation requires the identification and training of an implementation team that will in turn be responsible for training other customs officers. In addition, the team is usually responsible for implementing the system at a pilot site prior to national implementation.

70. *Creating a new environment.* The support of the users of the system is also crucial. They must be ready to accept change and reform and be motivated through information and training to understand the benefits of the system and their role in its operation. It is important to build a local computer culture.

71. *Customer service.* Credibility of the ASYCUDA Programme can be strengthened or eroded by its ability to respond to the users' needs in an effective and timely manner. Two of the most sensitive areas are software delivery and support. The latter, especially efforts concerning problem solution and change request, is critical.

72. *Programme resources.* Stable and predictable funding is a pre-condition for the success of the ASYCUDA Programme. The Programme has strong vision and good technical capacity but uncertain funding has limited its potential. The Programme's weaknesses in design and management are also largely due to this factor.

B. Recommendations

73. At the national level, competitive pressures, multinational norms, and the unique demands of trade negotiations call for a customs service with the power to facilitate the movement of goods while at the same time protecting the legitimate trader through effective enforcement, generating and accurately accounting for revenues, and producing statistics that will provide the substance for policy formation. The nature of future technical support must provide a foundation that will enable customs administrations to adjust to the new realities and, more importantly, develop their own agendas. The nature and essence of the current programme management and the conversion of its concepts into realities have resulted in effecting quantum leaps for user countries but they are no longer sufficient.

74. In the above light, the following recommendations are made:

(1) Unstable and inadequate funding has been, and continues to be, a major concern which limits the potential of the Programme. Member States must recognize that political support has to be balanced by stable and adequate funding. In the absence of action on the recommendation in the Anstee Report ("Policy review of technical cooperation", TD/B/40(2)/14) regarding a "General Trust Fund", UNCTAD should pursue the concept at the programme level by, in this case, encouraging the establishment of an "ASYCUDA Trust Fund". At the same time, a review of staffing of the Programme is called for, in particular in the light of the other recommendations made below.

(2) The continuation of technical support to the computer system in individual countries remains a matter of concern, 3/ in particular after the termination of the project. Regional/subregional centres should play an important role in securing the sustainability of country projects, especially after their termination. While the principal functions of the centres have revolved around initiation and implementation of the projects, at this stage they should be able to support countries - through trouble-shooting -, in

ensuring continuous implementation of norms and standards set by the ASYCUDA Programme and, at the same time, in adapting to new technological changes. The latter has become a major challenge to the Programme. Financial means for sustaining these regional centres is a key issue. In case of the is continuation of inter-country support for lack of funding or at the termination of the project, one possible solution could be the development of regional networks of customs administrations using ASYCUDA who can support each other with technical assistance. An alternative could be to establish, at the stage of project planning and design, a budget line to finance "emergency assistance" after the installation of the system.

(3) Projects that introduce fundamental changes through computerization of key operations that affect the status quo of the work environment often provide opportunities to pursue other significant changes within the broader context of the beneficiary organization's mission, in this case customs administrations. Where these opportunities arise, efforts should be made to capitalize on them in terms of longer-term institutional adaptation.

(4) The ASYCUDA Programme should continue to lay emphasis on the consistency with the Government's economic policy and good integration with the UNDP country programme. The introduction of Version 3 (ASYCUDA++) in replacement of Version 2 presents a challenge as it requires a deeper reform in the recipient countries, including entities other than customs administration. Consequently, prerequirements for installing the system are stronger. In this light, cooperation between UNCTAD and other institutions such as the World Bank and IMF should be strengthened.

(5) The basic management policies and procedures now need to be adjusted to cope with the new realities and much more attention needs to be devoted to other crucial areas such as sound software, adequate training, comprehensive documentation, and creditable user support. The Programme should also establish benchmarks for response time to users' requests for information, clarification and assistance. Coordination and monitoring of the Programme should be strengthened and, in this connection, a coordinator to assist the ASYCUDA Programme manager in oversight should be designated and assigned responsibility for: (i) day-to-day horizontal and vertical liaison and coordination at central, regional and country levels; (ii) monitoring of implementation of work plans of individual projects; and (iii) managing a central help desk/enquiry hotline which the Programme should put in place for efficient support of users.

(6) More attention should be devoted to communications with donors and beneficiaries. At the same time, there is much to be said for resuming the issuance of the newsletter (discontinued some three years ago) to provide information on developments, discuss common problems and generally serve as a link between the Geneva central team, regional/subregional support centres and customs administrations.

(7) The Programme should immediately build and diligently maintain an automated system to track the progress of its client countries and to monitor the effectiveness of project results, so that the determination of effectiveness is based on objective findings. Past assumptions need to be

scrutinized for their validity in the future in order to enable the proper design of a project document for any country adopting ASYCUDA++ and define interim measures for others. The Programme should adopt a "discovery-driven planning" 4/ approach involving the systematic review of assumptions into knowledge as a project unfolds, in particular in situations where, given a high degree of uncertainty, past assumptions may be only vague guides to future action.

Notes:

1/ Unless otherwise specified, in this report Programme refers to the ASYCUDA Programme.

2/ A statement at a seminar sponsored by IMF, the World Bank and the Inter-American Development Bank, 7-8 January 1993.

3/ Such a concern has been expressed by a large number of users, particularly Asia/Pacific and Caricom countries,

4/ "Discovery-driven Planning", Gunther McGrath R. & MacMillan I.C., Harvard Business Review, July August 1995.

Annex
ASYCUDA PROGRAMME: STATUS OF IMPLEMENTATION

COUNTRY	*VERSION* in operation/installed/being installed	*COMPLETED* Date of Completion	*ON-GOING*	*PIPELINE/PROPOSAL1*
Albania				x
Anguilla	2.6		x	
Antigua/Barbuda	2.6		x	
Armenia	++		x	
Aruba	2.51	1995		
Bangladesh	2.6	1994		
Barbados	2.51/2.6	1993		
Belize	2.6		x	
Benin	2.51/2.6	1993		
Bhutan				x
British Virgin Islands	2.6		x	
Burkina Faso	2.6		x	
Burundi	2.51/2.6	1993		
Cape Verde2,3	2.5/2.6	1989, 1990, 1992		x
Central African Republic	2.5/2.6	1992		
Colombia2,3	2.51/2.6	1994	x	
Comoros	2.5/2.6	1993		
Cuba	2.6		x	
Dominica2		1989, 1993		
Djibouti				x
El Salvador2	2.51/2.6	1993	x	
Gambia	2.6		x	
Georgia	++		x	
Ghana	2.6	1993		
Gibraltar	2.6	1993		
Grenada			x	
Guatemala3	2.51		x	
Guinea	2.6		x	
Guinea Bissau	2.6		x	
Guyana	2.6		x	
Haiti2	2.31	1993		x
Honduras2	2.51/2.6	1993	x	
Hungary	++		x	
Iran, Islamic Rep.				x
Lebanon	++		x	
Madagascar2,3	2.5	1994	x	
Maldives	2.51/2.6	1994		

1. Projects either negotiated or in process of approval
2. More than one ASYCUDA project
3. Projects where Version 2 was installed and where the installation of Version 3 is being considered.

ASYCUDA PROGRAMME: STATUS OF IMPLEMENTATION

COUNTRY	*VERSION* in operation/installed/being installed	*COMPLETED* Date of Completion	*ON-GOING*	*PIPELINE/PROPOSAL1*
Mali	2.6		x	
Malta	2.6	1995		
Mauritania2,3	2.6	1991		x
Mauritius	2.51/2.6		x	
Mongolia	2.6		x	
Montserrat	2.6		x	
Mozambique	2.51		x	
Namibia	2.6		x	
Nepal				x
Netherland Antilles	2.51/2.6	1995		
Nicaragua	2.6		x	
Niger	2.5	1993		
Pakistan		1993		
Panama2	2.51/2.6	1991	x	
Papua New Guinea3	2.6	1995		
Peru			x	
Philippines	++		x	
Romania	++		x	
Rwanda2,3	2.51/2.6	1994	x	
Slovakia	++		x	
St. Kitts and Nevis	2.6		x	
St. Lucia	2.6		x	
St. Vincent & Grenadines	2.6		x	
Sao Tome and Principe	2.6		x	
Sri Lanka	2.6		x	
Sudan	2.51/2.6	1995		
Oman				x
Suriname	2.6		x	
Tanzania, United Rep.	2.6		x	
Togo3	2.4	1993		
Trinidad and Tobago	2.6		x	
Turks and Caicos	2.6		x	
Venezuela			x	
Viet Nam	2.6		x	
Yemen				x
Zaire2	2.5	1990, 1992		
Zambia				x
Zimbabwe	2.6	1995		

1. Projects either negotiated or in process of approval
2. More than one ASYCUDA project
3. Projects where Version 2 was installed and where the installation of Version 3 is being considered.

ASYCUDA PROGRAMME: STATUS OF IMPLEMENTATION

REGION	*ON-GOING*	*COMPLETED*	*SUPPORT CENTRE*	*PIPELINE/PROPOSAL*
		Date of Completion		
Central American Project CAM (Guatamala City)		1994		
Common Market for Eastern and Southern Africa COMESA (Lusaka)	x		3	
ECOWAS Project (Lome - Togo)	x			
Inter-Country Project for Asia and the Pacific Region RAS (Kuala Lumpur)	x		1	
Sub-Regional Caribbean Project CAR/94/004	x		3	
Expansion of Inter-Arab Trade, Arab Region				x
Proposal for a Regional Support Centre for two CIS				x
Sub-regional for the Pacific				x
New Central American Centre				x
New Eastern European Centre				x